

### REMARKS

Claims 1-15 are pending.

Claims 1-15 stand rejected under 35 USC 112, first paragraph.

Claims 1-2, 4-5, 8, and 12 stand rejected under 35 USC §103(a) as being allegedly unpatentable over Hoyt (US 2001/0046050) in view of Kopf-Sill et al (US 6,358,387).

Claims 3, 13, and 14 stand rejected under 35 USC §103(a) as being allegedly unpatentable over Hoyt (US 2001/0046050) or Hoyt (US 2001/0033374) in view of Kopf-Sill et al (US 6,358,387) and further in view of Nordman et al. (US 6,231,739).

Claims 6-7, 9 stand rejected under 35 USC §103(a) as being allegedly unpatentable over Hoyt (US 2001/0046050) or Hoyt (US 2001/0033374) in view of Kopf-Sill et al (US 6,358,387) and further in view of Stabile et al. (US 5,854,684).

Claims 10-11, and 15 stand rejected under 35 USC §103(a) as being allegedly unpatentable over Hoyt in view of Kopf-Sill et al (US 6,358,387) and further in view of Modlin et al. (US 2001/0007496).

#### **Changes in the Claims:**

Claim 1 has been amended in this application to further particularly point out and distinctly claim subject matter regarded as the invention. The amendments are supported in the specification by FIG. 1 and the specification at page 5, line 33: "laser source 1 may provide a thin plane of laser light 3 which penetrates the structure 4 of microchannels.

No new matter has been added.

**Rejection under 35 USC 112, first paragraph – claims 1-15**

Claims 1-15 stand rejected under 35 USC 112, first paragraph. This rejection is respectfully traversed. The amendments to claim 1 are supported by the specification at page 5, line 33 and FIG. 1:

**Rejection under 35 USC §103(a) – claims 1-2, 4-5, 8, and 12**

Claims 1-2, 4-5, 8, and 12 stand rejected under 35 USC §103(a) as being allegedly unpatentable over Hoyt in view of Kopf-Sill et al (US 6,358,387). This rejection is respectfully traversed.

Under MPEP §706.02(j), in order to establish a prima facie case of obviousness required for a §103 rejection, three basic criteria must be met: (1) there must be some suggestion or motivation either in the references or knowledge generally available to modify the reference or combine reference teachings (MPEP §2143.01), (2) a reasonable expectation of success (MPEP §2143.02), and (3) the prior art must teach or suggest all the claim limitations (MPEP §2143.03). See In re Royka, 490 F. 2d 981, 180 USPQ 580 (CCPA 1974).

Hoyt teaches an apparatus that provides a beam of light which is split into a plurality of output beams by a diffractive beam splitter, which beams in polarization state illuminate samples at plate, yielding fluorescent light.

Kopf-Sill teaches a structure of microchannels defining a plane. The excitation beam is focused on this plane as a large aspect ratio elliptical illumination beam. See col. 16, lines 55-57 and Fig. 3. In particular, source and optical elements are positioned such that the elliptical excitation beam impinges on substrate at a **non-normal angle of**

**incidence  $\phi$ .** Kopf-Sill further teaches that the angle of incidence  $\phi$  should be approximately 45° relative to the plane defined by the substrate, although other non-normal angles of incidence may be used. See col. 16, lines 60-66.

Applicant requests reconsideration of claims 1-2, 4-5, 8, and 12 rejection because the proposed combination of Hoyt and Kopf-Sill does not teach or suggest the presently claimed invention. In particular, the presently claimed invention claims the limitation of **“said polarized light forming a beam substantially parallel to said plane”**. See claim 1. The above limitation indicates that light propagates along the axis of the microchannels. The angle of incidence of the polarized light relative to the plane defined by the microchannels is approximately 90°. See Fig. 1. In contrast, Hoyt and Kopf-Sill teach only a **non-normal angle of incidence** (from about 30° to 60°). There is no suggestion in Kopf-Sill that suggest forming a beam substantially parallel to said plane.

Applicant therefore submits that the rejection based Hoyt and Kopf-Sill is improper and should be withdrawn. Thus, Applicant submits that claims 1-15 recite novel subject matter which distinguishes over any possible combination of Hoyt and Kopf-Sill.

**Rejection under 35 USC §103(a) – claims 3, 13, and 14**

Claims 3, 13, and 14 stand rejected under 35 USC §103(a) as being allegedly unpatentable over Hoyt in view of Kopf-Sill et al (US 6,358,387) and further in view of Nordman et al. (US 6,231,739). This rejection is respectfully traversed.

These rejections are respectfully traversed for at least the reason that each of the rejected claims ultimately depend on an above-discussed base claim. The arguments set

forth above regarding the base claims are equally applicable here. The base claims being allowable, the dependent claims must also be allowable.

**Rejection under 35 USC §103(a) – claims 6, 7, and 9**

Claims 6, 7, and 9 stand rejected under 35 USC §103(a) as being allegedly unpatentable over Hoyt (US 2001/0046050) in view of Kopf-Sill et al (US 6,358,387) and further in view of Stabile et al. (US 5,854,684). This rejection is respectfully traversed.

These rejections are respectfully traversed for at least the reason that each of the rejected claims ultimately depend on an above-discussed base claim. The arguments set forth above regarding the base claims are equally applicable here. The base claims being allowable, the dependent claims must also be allowable.

**Rejection under 35 USC §103(a) – claims 10, 11, and 15**

Claims 10, 11, and 15 stand rejected under 35 USC §103(a) as being allegedly unpatentable over Hoyt in view of Kopf-Sill et al (US 6,358,387) and further in view of Modlin et al. (US 2001/0007496). This rejection is respectfully traversed.

These rejections are respectfully traversed for at least the reason that each of the rejected claims ultimately depend on an above-discussed base claim. The arguments set forth above regarding the base claims are equally applicable here. The base claims being allowable, the dependent claims must also be allowable.



Appl. No. 09/915,514  
Amdt. Dated March 8, 2004  
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Docket No.034299-000337

**Conclusion**

For all of the above reasons, applicants submit that the amended claims are now in proper form, and that the amended claims all define patentable subject matter over the prior art. Therefore, Applicants submit that this application is now in condition for allowance.

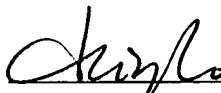
**Request for allowance**

It is believed that this Amendment places the above-identified patent application into condition for allowance. Early favorable consideration of this Amendment is earnestly solicited. If, in the opinion of the Examiner, an interview would expedite the prosecution of this application, the Examiner is invited to call the undersigned attorney at the number indicated below.

The Commissioner is hereby authorized to charge any additional fees or credit any overpayment to Deposit Account No. 50-1698.

Respectfully submitted,  
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